

# Corvallis Municipal Airport

AIRPORT MASTER PLAN

Corvallis, Oregon



# **AIRPORT MASTER PLAN**

**for**

## **Corvallis Municipal Airport Corvallis, Oregon**

**Prepared for**

**The City of Corvallis**

**by**

**Coffman Associates, Inc.**

**FINAL**

**September 2013**

"The preparation of this document was financially supported, in part, through the Airport Improvement Program as administered by the Federal Aviation Administration as provided under Title 49 United States Code, Section 47104. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws."



---

## TABLE OF CONTENTS

# *C*ONTENTS

## **CORVALLIS MUNICIPAL AIRPORT Corvallis, Oregon**

### **Airport Master Plan**

#### **INTRODUCTION**

MASTER PLAN OBJECTIVES .....	ii
MASTER PLAN ELEMENTS AND PROCESS .....	iii
STUDY COORDINATION .....	iv

#### **Chapter One INVENTORY**

BACKGROUND INFORMATION.....	1-1
Location and Access.....	1-2
Airport History and Development .....	1-2
Airport Administration.....	1-5
Regional Climate .....	1-5
Area Transportation Modes .....	1-6
AREA LAND USE .....	1-7
Compatible Land Use .....	1-7
Current Land Use Planning and Zoning .....	1-13
AIRPORT SYSTEM PLANNING ROLE .....	1-14
Federal Airport Planning .....	1-15
State Airport Planning .....	1-16
Local Airport Planning.....	1-18
Economic Impact .....	1-18
AIRSIDE FACILITIES .....	1-19
Runways.....	1-20
Pavement Condition .....	1-20
Taxiways .....	1-21

## **Chapter One (Continued)**

Pavement Markings .....	1-21
Airfield Lighting .....	1-22
Weather and Communication Aids.....	1-23
Navigational Aids.....	1-24
Area Airspace .....	1-25
Instrument Approach Procedures .....	1-26
Instrument Departure Procedures .....	1-28
Runway Use and Traffic Patterns.....	1-28
<b>LANDSIDE FACILITIES.....</b>	<b>1-29</b>
Airport Aviation Businesses .....	1-29
Airport Industrial Park.....	1-29
Aircraft Hangar Facilities.....	1-30
Aircraft Parking Apron .....	1-32
Automobile Parking.....	1-32
Emergency Response .....	1-32
Airport Maintenance .....	1-33
Utilities.....	1-33
Fuel Facilities .....	1-34
Fencing.....	1-34
Additional Airport Documentation.....	1-34
<b>HISTORICAL AIRPORT ACTIVITY.....</b>	<b>1-34</b>
Annual Operations .....	1-34
Based Aircraft.....	1-35
<b>AIRPORT SERVICE AREA.....</b>	<b>1-35</b>
Regional Airports.....	1-36
Based Aircraft Location.....	1-37
Service Area Summary .....	1-37
<b>HISTORIC SOCIOECONOMIC DATA.....</b>	<b>1-37</b>
<b>ENVIRONMENTAL INVENTORY.....</b>	<b>1-39</b>
Air Quality.....	1-39
Coastal Resources.....	1-40
Compatible Land Use .....	1-40
Department of Transportation (DOT) Act: Section 4(f) .....	1-40
Farmlands.....	1-41
Fish, Wildlife, and Plants.....	1-41
Floodplains.....	1-43
Hazardous Materials and Wastes .....	1-44
Historical, Architectural, Archaeological, and Cultural Resources.....	1-44
Visual Resources .....	1-45
Energy Supply and Natural Resources .....	1-45
Noise .....	1-45
Social Impacts .....	1-46
Water Quality .....	1-47
Wetlands/Waters of the United States.....	1-47
Wild and Scenic Rivers .....	1-48

## **Chapter One (Continued)**

SUMMARY .....	1-48
DOCUMENT SOURCES.....	1-49

## **Chapter Two FORECASTS**

SOCIOECONOMIC CHARACTERISTICS.....	2-3
AVIATION TRENDS .....	2-4
National Trends.....	2-4
General Aviation Trends.....	2-5
FAA GENERAL AVIATION FORECASTS .....	2-7
Active Aircraft Fleet Mix .....	2-7
Operations.....	2-9
AVIATION FORECAST METHODOLOGY .....	2-9
GENERAL AVIATION FORECASTS.....	2-11
Historical Aircraft Ownership.....	2-11
Registered Aircraft Forecasts .....	2-12
Based Aircraft Forecast.....	2-16
Based Aircraft Fleet Mix Projections.....	2-19
Annual Operations .....	2-20
Operations Fleet Mix .....	2-25
Peaking Operations.....	2-26
Annual Instrument Approaches.....	2-27
SUMMARY .....	2-27

## **Chapter Three AIRPORT FACILITY REQUIREMENTS**

PLANNING HORIZONS .....	3-1
CRITICAL AIRCRAFT.....	3-2
Current Critical Aircraft .....	3-3
Future Critical Aircraft .....	3-5
Critical Aircraft Summary .....	3-6
AIRFIELD CAPACITY.....	3-7
AIRFIELD REQUIREMENTS.....	3-10
Runway Configuration.....	3-10
Safety Area Design Standards.....	3-11
Runways.....	3-14
Taxiways .....	3-18
Instrument Navigational Aids.....	3-19
Visual Navigation Aids.....	3-19
Weather and Communication Aids.....	3-20

## **Chapter Three (Continued)**

LANDSIDE REQUIREMENTS.....	3-21
Hangars.....	3-21
Aircraft Parking Apron .....	3-23
Cargo Transfer Apron .....	3-25
Terminal Building Facilities .....	3-25
SUPPORT REQUIREMENTS.....	3-26
Automobile Parking.....	3-26
Airport Access Roads .....	3-27
Aircraft Rescue and Firefighting (ARFF) Facilities.....	3-27
Fuel Storage .....	3-27
Perimeter Fencing.....	3-28
SECURITY RECOMMENDATIONS .....	3-28
Fractional Jet Operator Security Requirements .....	3-32
SUMMARY .....	3-33

## **Chapter Four ALTERNATIVES**

AIRPORT DEVELOPMENT OBJECTIVES.....	4-2
REVIEW OF THE PREVIOUS AIRPORT PLAN .....	4-3
AIRSIDE PLANNING CONSIDERATIONS .....	4-4
Runway Length and Width .....	4-4
Instrument Approaches .....	4-5
Runway Safety Areas.....	4-6
Runway Protection Zones .....	4-7
Navigation Aids .....	4-7
Taxiways .....	4-8
AIRSIDE DEVELOPMENT ALTERNATIVE I .....	4-8
Runway 17-35.....	4-8
Runway 9-27 .....	4-9
Taxiways .....	4-9
AIRSIDE DEVELOPMENT ALTERNATIVE II.....	4-10
Runway 17-35.....	4-10
Runway 9-27 .....	4-10
Taxiways .....	4-11
LANDSIDE PLANNING CONSIDERATIONS.....	4-11
Vehicular Access and Parking.....	4-13
Building Restriction Line .....	4-14
Terminal Building.....	4-14
WWII Era Hangar.....	4-14
LANDSIDE LAYOUT ALTERNATIVES .....	4-15
Landside Alternative A.....	4-15
Landside Alternative B .....	4-16
Landside Alternative C .....	4-17

## **Chapter Four (Continued)**

Landside Alternative D .....	4-18
Landside Summary .....	4-18
ALTERNATIVES SUMMARY .....	4-19

## **Chapter Five RECOMMENDED MASTER PLAN CONCEPT**

AIRSIDE CONCEPT.....	5-2
Design Standards .....	5-2
Runway Length.....	5-4
Runway Strength .....	5-4
Runway Safety Areas.....	5-5
Runway Protection Zones .....	5-5
Instrument Approaches .....	5-6
Runway/Taxiway Separation .....	5-7
Taxiways .....	5-7
Visual Navigation Aids .....	5-7
Property Acquisition .....	5-8
Airside Conclusion .....	5-8
LANDSIDE CONCEPT .....	5-9
Hangars.....	5-10
WWII Era Hangar.....	5-11
Vehicular Access and Parking.....	5-11
Taxilanes .....	5-12
Aircraft Apron .....	5-12
Water Tower.....	5-12
Terminal Building.....	5-13
Cargo Apron and Sort Facility.....	5-13
LAND USE CONSIDERATIONS.....	5-13
On-Airport Land Use Obligations .....	5-13
Airport Land Use Classification.....	5-15
Local Procedures for Development of Airport Property.....	5-17
Adjacent Land Use Compatibility .....	5-19
Land Use Recommendations.....	5-20
COMPLIANCE ISSUES: AIRPORT OBLIGATIONS.....	5-21
SUMMARY .....	5-22

## **Chapter Six CAPITAL IMPROVEMENT PROGRAM**

AIRPORT DEVELOPMENT SCHEDULES AND COST SUMMARIES.....	6-1
Short Term Improvements .....	6-3
Intermediate Term Improvements.....	6-6

## **Chapter Six (Continued)**

Long Term Improvements .....	6-7
Capital Improvement Summary.....	6-9
CAPITAL IMPROVEMENT FUNDING SOURCES.....	6-9
Federal Grants.....	6-9
State Aid to Airports .....	6-12
Local Funding.....	6-13
Local Financial Considerations .....	6-14
SUMMARY .....	6-18

## **EXHIBITS**

IA PROJECT WORK FLOW .....	after page iv
1A LOCATION MAP .....	after page 1-2
1B STATE LAND USE PROGRAM AND AIRPORTS .....	after page 1-10
1C CORVALLIS AIRPORT AREA LAND USE PLAN .....	after page 1-14
1D BENTON COUNTY AIRPORT AREA DEVELOPMENT PLAN.....	after page 1-14
1E EXISTING AIRPORT OVERLAY ZONES .....	after page 1-14
1F AIRSIDE FACILITIES.....	after page 1-20
1G PAVEMENT CONDITION .....	after page 1-22
1H AIRSPACE CLASSIFICATION.....	after page 1-26
1J AIRSPACE MAP .....	after page 1-26
1K LANDSIDE FACILITIES .....	after page 1-30
1L AIRPORT INDUSTRIAL PARK.....	after page 1-30
1M AIRPORT VEHICLE PARKING.....	after page 1-32
1N AIRPORT UTILITIES .....	after page 1-34
1P AIRPORT SERVICE AREA.....	after page 1-38
1Q FLOODPLAINS AND FARMLAND.....	after page 1-42
1R AIRPORT WETLANDS .....	after page 1-48
2A U.S. ACTIVE GENERAL AVIATION AIRCRAFT FORECASTS .....	after page 2-8
2B TWO-COUNTY REGISTERED AIRCRAFT FORECAST .....	after page 2-14
2C BASED AIRCRAFT FORECASTS .....	after page 2-20
2D GENERAL AVIATION OPERATIONS FORECASTS .....	after page 2-22
2E FORECAST SUMMARY .....	after page 2-28
3A AIRPORT REFERENCE CODES .....	after page 3-2
3B BUSINESS JET ACTIVITY.....	after page 3-6
3C AIRFIELD CAPACITY FACTORS.....	after page 3-8
3D WINDROSE .....	after page 3-10
3E AIRPORT SAFETY AREAS .....	after page 3-12
3F AIRSIDE REQUIREMENTS .....	after page 3-22
3G LANDSIDE REQUIREMENTS.....	after page 3-28

## **EXHIBITS (Continued)**

4A	2001 MASTER PLAN .....	after page 4-4
4B	PLANNING CONSIDERATIONS .....	after page 4-4
4C	AIRSIDE ALTERNATIVE 1 .....	after page 4-8
4D	AIRSIDE ALTERNATIVE 2 .....	after page 4-10
4E	LANDSIDE ALTERNATIVE A.....	after page 4-16
4F	LANDSIDE ALTERNATIVE B.....	after page 4-16
4G	LANDSIDE ALTERNATIVE C.....	after page 4-18
4H	LANDSIDE ALTERNATIVE D .....	after page 4-18
5A	RECOMMENDED MASTER PLAN CONCEPT .....	after page 5-2
5B	RECOMMENDED PROPERTY ACQUISITION .....	after page 5-6
5C	RECOMMENDED LANDSIDE CONCEPT .....	after page 5-10
5D	AIRPORT LAND USE PLAN.....	after page 5-16
6A	CAPITAL IMPROVEMENT PROGRAM .....	after page 6-4
6B	PROJECT STAGING .....	after page 6-4

### **Appendix A GLOSSARY OF TERMS**

### **Appendix B BENTON COUNTY AIRPORT OVERLAY ZONE**

### **Appendix C AIRPORT BUILDING EVALUATION**

### **Appendix D FAA FORECAST APPROVAL LETTER**

### **Appendix E ENVIRONMENTAL OVERVIEW**

### **Appendix F CIP COST ESTIMATES**

### **Appendix G WILDLIFE PERIMETER**

### **Appendix H AIRPORT PLANS**



[www.coffmanassociates.com](http://www.coffmanassociates.com)

**KANSAS CITY**  
**(816) 524-3500**

---

237 N.W. Blue Parkway  
Suite 100  
Lee's Summit, MO 64063

**PHOENIX**  
**(602) 993-6999**

---

4835 E. Cactus Road  
Suite 235  
Scottsdale, AZ 85254